



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,325	12/01/2000	Charles C. Morehouse	10003484	1034

7590 04/21/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

LEWIS, DAVID LEE

ART UNIT	PAPER NUMBER
----------	--------------

2673

DATE MAILED: 04/21/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,325

Applicant(s)

MOREHOUSE, CHARLES C.

Examiner

David L Lewis

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-3, 5-13, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over by O'Donnell, Jr. (6486875 B1) in view of Schiller et al. (2002/0031243) and Stevenson et al. (2002/0054026 A1).**

3. **As in claim 1, O'Donnell, Jr. teaches of an electronic pen for recording motion data relating to use of the pen, figures 1 and 2, comprising: a pen body, figure 1 item 3; a ball mounted in the pen body, figure 1 item 15; a sensor in the pen body, located proximate the ball, for detecting motion of the ball and converting the motion into corresponding electronic signals, figure 1 item 17, column 4 lines 1-15; and a memory in the pen body, electronically coupled to the sensor, for receiving the electronic signals and storing corresponding data related to the motion, figure 1 item 25, the data including data points related to positions of the ball and enabling extrapolation to generate lines**

representing the motion of the ball, **column 4 lines 1-30**, a circuit, electronically coupled to the sensor and the memory for sampling the sensor at a particular rate and controlling transmission of the corresponding transmission of the corresponding electronic signal from the sensor to the memory, **figure 1 item 23**. **However O'Donnell, Jr. is silent as to** wherein the circuit including a timer for determining the particular rate at which the sensor is sampled. **O'Donnel, Jr. teaches however that** microprocessor 23 is programmed achieve simultaneous data capture as a document is created with the pen and provide real time or delayed transmission to the associated computer, column 4 lines 12-15, and further that the memory can be associated with date and time clocks, column 4 lines 32-35. Said feature comprising a timer and sampling at a particular rate is inherent to microprosscesser taught by **O'Donnel, Jr**, as known in the art. **O'Donnel, Jr** teaches of storing data in memory 25, as it is created by the pen 1, wherein said a processor 23 is programmed to integrate all of the functions of the pen 1, which would obviously include controlling the sending of data to memory by a clock function internal or external to said processor. **Amano teaches of a timer**, figure 2 item 15 for sampling data from a ball based input device, column 13 lines 1-30, wherein the timer is used also adjusted by the processor for variable timing. **O'Connor et al. teaches** of a processor 118 managing conversion of data, including sampling of the data, by conversion device 116, wherein the processor 118 also manages the flow of information to and from memory 120, wherein given said sampling feature, a clock sampling at a particular rate is inherent. Both O'Donnel, Jr. and O'Connor et al. teach of like inventions who's features are interchangeable given their same basic structural system design. Both Amano and

O'Conner et al. support what would be obvious to the skilled artisan as inherent features to O'Donnel, Jr. **Therefore it would have been obvious** to the skilled artisan at the time of the invention that O'Donnel, Jr. includes a timing mechanism external as taught by Amano or internal as taught by O'Connor et al., for the purpose of sampling data at a particular rate, because said features are known to be inherent features for transferring data from an analog to digital input to a microprocessor, as taught by O'Donnel, Amano, and O'Conner et al., as found in claim 1.

4. **As in claim 11, O'Donnell, Jr. teaches of a method for recording motion data relating to use of a pen having a pen body, figure 1 item 3, a ball mounted in the pen body, figure 1 item 15, a memory, figure 1 item 25, and a sensor located proximate the ball, figure 1 item 17, comprising: detecting motion of the ball using the sensor, column 4 lines 1-30, sampling the sensor at a particular rate using a circuit electronically coupled t the sensor and to the memory, figure 1 item 23; converting the motion into corresponding electronic signals, column 4 lines 1-30; receiving the electronic signals, column 4 lines 1-30; and storing in memory, column 4 lines 1-31, based upon the electronic signals, corresponding data related to the motion, column 4 lines 1-31, the data including data points related to positions of the ball and enabling extrapolation to generate lines representing the motion of the ball, column 4 lines 1-30. However O'Donnell, Jr. is silent as to wherein the circuit including a timer for determining the particular rate at which the sensor is sampled. O'Donnel, Jr. teaches however that microprocessor 23 is programmed achieve simultaneous data capture as a document is created with the pen and**

provide real time or delayed transmission to the associated computer, column 4 lines 12-15, and further that the memory can be associated with date and time clocks, column 4 lines 32-35. Said feature comprising a timer and sampling at a particular rate is inherent to microprocessor taught by **O'Donnel, Jr**, as known in the art. **O'Donnel, Jr** teaches of storing data in memory 25, as it is created by the pen 1, wherein said a processor 23 is programmed to integrate all of the functions of the pen 1, which would obviously include controlling the sending of data to memory by a clock function internal or external to said processor. **Amano teaches of a timer**, figure 2 item 15 for sampling data from a ball based input device, column 13 lines 1-30, wherein the timer is used also adjusted by the processor for variable timing. **O'Connor et al. teaches** of a processor 118 managing conversion of data, including sampling of the data, by conversion device 116, wherein the processor 118 also manages the flow of information to and from memory 120, wherein given said sampling feature, a clock sampling at a particular rate is inherent. Both O'Donnel, Jr. and O'Connor et al. teach of like inventions who's features are interchangeable given their same basic structural system design. Both Amano and O'Connor et al. support what would be obvious to the skilled artisan as inherent features to O'Donnel, Jr. **Therefore it would have been obvious** to the skilled artisan at the time of the invention that O'Donnel, Jr. includes a timing mechanism external as taught by Amano or internal as taught by O'Connor et al., for the purpose of sampling data at a particular rate, because said features are known to be inherent features for transferring data from an analog to digital input to a microprocessor, as taught by O'Donnel, Amano, and O'Connor et al., as found in claim 11.

5. **As in claims 2 and 12, O'Donnell, Jr.** teaches of further including a removable ink cartridge, disposed with the pen body, for applying ink to the ball, column 3 lines 60-67, wherein the ink reservoir is as associated with that of conventional ball point pens known for their replaceable ink cartridge. **As in claims 3 and 13, O'Donnell, Jr.** teaches further including a port, located on the pen body and electronically coupled to the memory, for use in transferring the data from the memory to an external device, figure 1 item 27. **As in claims 5 and 15, O'Donnell, Jr.** teaches of further including a module for receiving the data and for converting the data into a visual representation of the motion of the ball, column 3 lines 1-30 **As in claims 6 and 16, O'Donnell, Jr.** teaches of further including a module for storing the visual representation, column 4 lines 48-54. **As in claims 7 and 17, O'Donnell, Jr.** teaches of wherein the sensor includes dual sensors for detecting directions from which orthogonal ball motions can be reconstructed, figure 1 item 17. **As in claims 8 and 18, O'Donnell, Jr.** teaches wherein the memory stores as the data coordinates representing the directions from which the orthogonal ball motions can be reconstructed, column 4 lines 23-41. **As in claims 9 and 19, O'Donnell, Jr.** teaches of wherein the memory stores an indication of a set of the motion data and a default location for a start of the corresponding motion, column 4 lines 1-41, wherein said features are inherent to the device as well known in the art. **As in claim 10 and 20, O'Donnell, Jr.** teaches wherein the memory comprises an atomic resolution storage memory, **figure 1 item 25**, wherein said memory is inclusive to all memory known in the art able to facilitate fine resolution memory as with atomic resolution storage.

6. **Claims 1, 3, 5-11, 13, and 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Persidsky (6130666) in view of Amano (5691747) and O'Connor et al. (6188392 B1).**

7. **As in claims 1 and 11, Presidsky teaches of an electronic pen for recording motion data relating to use of the pen, figures 1-4, comprising: a pen body, figure 1 item 10; a ball mounted in the pen body, figure 4 item 128; a sensor in the pen body, located proximate the ball, for detecting motion of the ball and converting the motion into corresponding electronic signals, column 4 lines 28-41; and a memory in the pen body, electronically coupled to the sensor, for receiving the electronic signals and storing corresponding data related to the motion, figure 1 item 22, the data including data points related to positions of the ball and enabling extrapolation to generate lines representing the motion of the ball, column 4 lines 1-20. However Presidsky is silent as to said timer and sampling at a particular rate. Said feature comprising a timer and sampling at a particular rate is inherent to microprocessor taught by Presidsky, as known in the art. Presidsky teaches of sending digitized signals to processor 40, wherein said signals are obviously sent along a bus system controlled by an clock internal or external clock to the processor 40. Amano teaches of a timer, figure 2 item 15 for sampling data from a ball based input device, column 13 lines 1-30, wherein the timer is used also adjusted by the processor for variable timing. O'Connor et al. teaches of a processor 118 managing conversion of data, including sampling of the data, by conversion device 116, wherein the processor**

118 also manages the flow of information to and from memory 120, wherein given said sampling feature, a clock sampling at a particular rate is inherent. Both Presidsky and O'Connor et al. anticipate the claimed invention, however O'Connor et al. has been used to support Presidsky teaching. Both Presidsky and O'Connor et al. teach of like inventions who's features are interchangeable given their same basic structural system design. Both Amano and O'Conner et al. support what would be obvious to the skilled artisan as inherent features to Presidsky. **Therefore it would have been obvious** to the skilled artisan at the time of the invention that Presidsky includes a timing mechanism internal as taught by Amano or external as taught by O'Connor et al., for the purpose of sampling data at a particular rate, because said features are known to be inherent features for transfereing data from an analog to digital converter to a microprocessor, as taught by Presidsky, Amano, and O'Conner et al., as found in claims 1 and 11.

8. **As in claims 3 and 13, Presidsky** teaches further including a port, located on the pen body and electronically coupled to the memory, for use in transferring the data from the memory to an external device, figure 13 item 70. **As in claims 5 and 15, Presidsky** teaches of further including a module for receiving the data and for converting the data into a visual representation of the motion of the ball, column 4 lines 1-20. **As in claims 6 and 16, Presidsky** teaches of further including a module for storing the visual representation, column 4 lines 10-26. **As in claims 7 and 17, Presidsky** teaches of wherein the sensor includes dual sensors for detecting directions from which orthogonal ball motions can be reconstructed, column 4 lines 28-40, figure 9. **As in claims 8 and**

18, **Presidsky** teaches wherein the memory stores as the data coordinates representing the directions from which the orthogonal ball motions can be reconstructed, column 4 lines 10-20, **O'Connor et al.**, column 5 lines 1-11. **As in claims 9 and 19, Presidsky** teaches of wherein the memory stores an indication of a set of the motion data and a default location for a start of the corresponding motion, column 6 lines 40-57, wherein said features are inherent to the device as well known in the art. **As in claim 10 and 20, Presidsky** teaches wherein the memory comprises storage memory, **figure 4 item 22**, wherein said memory is inclusive to all memory known in the art able to facilitate fine resolution memory as with atomic resolution storage. **As in claim 21, Predsky** teaches wherein the circuit is capable of varying the rate at which the sensor is sampled based on the motion of the ball, column 5 lines 29-33. **As in claim 23, Predsky teaches** of further including the step of changing the rate at which the sensor is sampled based upon the motion of the ball, column 5 lines 29-33. **As in claim 22, Predsky teaches** of a first switch for turning on and off the circuit, **figure 3 item 38**; a second switch for enabling a user to store in the memory a reset indication to start storing data related to the motion of the ball from a default location stored in memory, **figure 3 item 36**, said sensor comprising X/Y position sensors, **column 4 lines 28-41**, the circuit further comprising a timer, **figure 3 item 40**, said timer inherent to said processor as argued above.

Response to Arguments

9. Applicant's arguments filed on 2/6/2004 with respect to claims 1-3, 5-13, and 15-23 have been considered but are not persuasive. The 112 rejection of the previous office action is withdrawn. All remaining rejections have been maintained. While O'Donnell, Jr., Peridsky, or O'Connor et al. can be argued to fully anticipate the Applicants invention alone, O'Connor et al. has been added to support what is inherent to the system described by O'Donnell, Jr or Peridsky. Amano is also added in support of the timer for sampling at a particular rate. Further, the capacity of O'Donnell, Jr, to provide real time data capture would inherently necessitate a timing function for the purpose of varying data capture in accordance with acceleration speed of the input device as directed by the user in real time. The motivation to combine references was to support the inherency of the features found in O'Donnell, Jr. Rejection maintained.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the

statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is (703) 306-3026. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600